

III. SERVICE CATEGORIES BASED ON INTERNATIONALLY RECOGNIZED STANDARDS

The eleven- (11) service categories represent the services that are allowed to be contracted for within this MSA. Next, a definition for each service category is listed used as for guideline to help ordering agencies determine the most appropriate category/sub-category for their projects. Following the categories, is the definition of the personnel classifications to be used as guidelines to evaluate the experience of the personnel included in the contractor's RFO response in order to determine responsiveness.

A. SERVICE CATEGORIES

The Information Technology Consulting Services categories and/or sub-categories offered in this MSA include:

- Category I = **Independent Project Oversight Activities**
 - Sub-category IA = Independent Verification and Validation
 - Sub-category IB = Project Management Oversight

- Category II = **Project Activities**
 - Sub-category IIA = Programming
 - Sub-category IIB = System Integration/Analysis/Design
 - Sub-category IIC = System Support
 - Sub-category IID = Project Management
 - Sub-category IIE = Quality Assurance

- Category III = **Miscellaneous Activities**
 - Sub-category IIIA = IT Planning
 - Sub-category IIIB = IT Facilitation
 - Sub-category IIIC = Training
 - Sub-category IIID = Report Writing

B. STANDARDS

The standards that support this MSA comply with the State's selected internationally recognized standards. The three approved standards to be used in support of the services of this MSA are:

1. IEEE standards shall be utilized in the design, fabrication and modification of IT systems.
2. ISO standards for qualify (ISO 9000series) shall be applied to appropriate components.
3. PMI—Project Management Body of Knowledge (IEEE Std. 1490) will be utilized for project management and PMI—Project Management Professional certification may be required of contractors providing project management services.

C. DESCRIPTION OF WORK BY SERVICE CATEGORY

Category I—Independent Project Oversight Activities

This category includes Project Oversight/Auditing services and Independent Project Auditing Function services that result in reports to the ordering agency project sponsor and to the assigned project analyst at the Department of Information Technology (DOIT). The activities that DOIT requires to be performed include effective oversight of large and/or complex IT projects which provide value to state programs and the constituencies they serve. Independent Project Oversight Contractors (IPOC) may be engaged to perform third party oversight and quality assurance services on large and/or complex projects. As a condition of project approval, DOIT may require IPOC services be used. If IPOC services are required by DOIT, the ordering agency and DOIT will jointly develop the Statement of Work. The IPOC will be required to submit deliverables, reports and findings concurrently to both DOIT and the ordering agency.

This category includes the following activities:

Sub-category IA = Independent Verification and Validation (IV&V)—Verification is an iterative process aimed at determining whether the product of each step in the development cycle (a) fulfills all the requirements levied on it by the previous step, and (b) is internally complete, consistent, and correct enough to support the next phase of the project. Validation is the process of executing software and exercising the hardware, and comparing the test results against the required performance. IV&V is typically used for large, complex custom development projects where the requirement have been deemed critical.

Sub-category IB = Project Management Oversight—Auditing of information system development, acquisition, and maintenance controls to help assure a structured project management methodology is being followed and appropriately managed.

Category II – Project Activities

Category II is used for IT projects that do not fall under Category I above. The services of this category will be used for IT projects that the ordering agency has identified a need for contractor support implementing the project, to assist managing the project, or to assure the quality of the software being developed/system being implemented. This category applies to project activities such as a) programming; b) system integration/analysis/design; c) system support; d) project management; and e) quality assurance.

This category includes the following activities:

Sub-category IIA = programming = self explanatory

Sub-category IIB = systems integration/analysis/design = impact analysis plans, disaster recovery planning, analysis of backup/recovery plan

Sub-category IIC = system support = ongoing maintenance and operation

Sub-category IID = project management = risk assessment, V&V, project audit/oversight, technical audit/oversight

Sub-category IE = quality assurance = self explanatory

Category III – Miscellaneous Activities

Category III is used for those activities such as a) IT planning, b) IT facilitation, c) training and d) report writing. Services provided under this category may include services for writing technical documents such as program specifications, system documentation, standards, procedure manuals and conversion of existing documentation. The deliverables could also include documents such as, Feasibility Study Reports (FSRs), solicitation document preparation and Post Implementation Evaluation Reports. The services can also include training services that can include the development of training curricula and user manuals. Contractors may also be hired to conduct training sessions for the ordering agency's specific processes or for systems developed in-house. (NO application training ie, Windows)

This category includes the following activities:

Sub-category IIIA = IT planning = FSR, solicitation document preparation, PIER

Sub-category IIIB = IT Facilitation = act as liaison as needed, conduct meetings, lead JAD sessions

Sub-category IIIC = training = training curricula, conduct training sessions

Sub-category IIID = report writing = technical documents (program specs, system documentation, standards, procedure manuals, conversion of existing documentation), user manuals

D. STAFF EXPERIENCE REQUIREMENTS

There are ten (10) approved personnel classifications that can be contracted for under this MSA. Each contractor will be responsible for supplying personnel to meet the requirements as described below in order to be compliant with the scope of this MSA. Experience must be within the last 3 years from the date of contractor's RFO response.

1. Senior Project Manager

A Senior Project Manager is at the full journey level responsible for the most complex projects. This classification manages both internal and external project teams and interacts with department heads, agency secretaries at the ordering agency, State control agencies, and individuals of similar status in the private sector.

The Senior Project Manager has full responsibility for the private sector projects tasks and deliverables and is the lead to the private sector team.

Certifications and Degrees: This classification must have Project Management Professional (PMP) or equivalent certification. This classification must have a minimum of four (4) years of broad and extensive project experience. At least three (3) years of that experience must have been in a lead capacity. This classification requires the possession of a baccalaureate or equivalent university degree and a minimum of 4,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes within the last six years; or c) possession of a high school diploma or equivalent secondary school credential and a minimum of 7,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes.

2. **Project Manager**

A Project Manager is at the journey level and is usually in a training assignment for the higher professional level such as a senior. The Project Manager typically is responsible for projects usually interacting with mid-level officials of similar status at the ordering agency/private sector. The Project Manager is working under general supervision of an executive level person or a senior level manager. This classification must have a minimum of three (3) years of broad and extensive project experience. At least two (2) years of that experience must have been in a lead capacity. This classification must have the ability to establish and maintain cooperative working relationships; use interdisciplinary teams effectively in the conduct of the project; speak effectively before large groups; reason logically and creatively and use a variety of analytical and research techniques to solve complex problems; analyze situations and propose an effective course of action; analyze data; identify the need for and provide creative thinking related to complex problems, develop and evaluate alternatives; write thorough, credible, well-documented reports; work within tight deadlines.

Certifications and Degrees: This classification requires the possession of a) a current PMP certification; b) possession of a baccalaureate or equivalent university degree and a minimum of 4,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes within the last six years; or c) possession of a high school diploma or equivalent secondary school credential and a minimum of 7,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes.

3. **Senior Technical Leader**

A Senior Technical Leader is at the full journey level acting in a lead capacity on complex projects interacting with mid-level officials of similar status at the ordering agency/private sector. The incumbent must have experience in a variety of electronic information processing systems analysis, design, development, installation, implementation, procurement, or technical support duties in connection with data processing systems, multifunction office automation systems, microcomputer systems, or teleprocessing networks. This classification must have a minimum of four (4) years of experience in projects. At least three (3) years of that experience must have been in a supervisory capacity. This classification must be able to supervise technical personnel. In addition, this classification must be able to analyze data and situations, identify and solve problems, reason logically and draw valid conclusions; develop effective solutions; apply creative thinking in the design of methods of processing data with electronic computers; monitor and resolve problems with information processing systems hardware, software and processes; establish and maintain effective working relationships with others; communicate effectively verbally and in writing.

Degrees: This classification requires the possession of a baccalaureate or equivalent university degree or certificate in management information systems or computer science.

4. **Technical Leader**

A Technical Leader is at the journey level, performing progressively responsible analytical work in a variety of electronic information systems analysis, design, development, installation, implementation, procurement, or technical support duties in connection with data processing systems, multifunction office automation systems, microcomputer systems, or teleprocessing networks. This classification must have a minimum of three (3) years' experience in smaller, less complex projects. At least two (2) years of that experience must have been in a supervisory capacity. This classification must be able to analyze data and situations; identify and solve problems; reason logically and draw valid conclusions; develop effective solutions; apply creative thinking in the design of methods of processing data with electronic computers; monitor and resolve problems with information processing systems hardware, software and processes; establish and maintain effective working relationships with others; communicate effectively verbally and in writing.

Degrees: This classification requires the possession of a baccalaureate or equivalent university degree or certificate in management information systems or computer science.

5. **Application Analyst—Business Oriented**

An Application Analyst is the full journey level working under general supervision of a technical Leader or project Manager performing a variety of tasks in connection with the analysis, development, installation, implementation, procurement, or support of electronic information processing systems, multifunction automated office systems, microcomputer systems, and teleprocessing networks and/or systems; and/or participates with other analysts on electronic information processing systems studies of complex nature or broad scope. This classification must have a minimum of two (2) years' experience in working on data processing related projects. At least one (1) year of that experience must have been in application development or maintenance. This classification must be able to analyze data and situations, identify and solve problems, reason logically and draw valid conclusions; develop effective solutions; apply creative thinking in the design of methods of processing data with electronic computers; monitor and resolve problems with information processing systems hardware, software and processes; establish and maintain effective working relationships with others; communicate effectively verbally and in writing.

Certifications and Degrees: Possession of IT career certification that acknowledges skills and competency in the area of specialization. This classification requires the possession of a baccalaureate or equivalent university degree in management information systems or computer science and/or experience as described above.

6. **Systems Analyst**

A Systems Analyst is the full journey level working under general supervision of a Technical Leader or Project Manager performing a variety of tasks in connection with the analysis, development, installation, implementation, procurement, or support of electronic information processing systems, multifunction automated office systems, microcomputer systems, and teleprocessing networks and/or systems; and/or participates with other analysts on electronic information processing systems studies of complex nature or broad scope. This classification must have a minimum of two (2) years' experience in working on data processing related projects. At least one (1) year of that experience must have been in systems analysis and design. This classification must be able to analyze data and situations, identify and solve problems, reason logically and draw valid conclusions; develop effective solutions; apply creative thinking in the design of methods of processing data with electronic computers; monitor and resolve problems with information processing systems hardware, software and processes; establish and maintain effective working relationships with others; communicate effectively verbally and in writing.

Certifications and Degrees: Possession of IT career certification that acknowledges skills and competency in the area of specialization. This classification requires the possession of a baccalaureate or equivalent university degree in management information systems or computer science and/or experience as described above.

7. **Senior Programmer**

A Senior Programmer acts in a lead capacity on the most complex applications, and/or on the most complex data processing problems and can work independently as a high level technical specialist. This classification must have a minimum of five (5) years experience in electronic data processing systems study, design, and programming, at least (3) years of which shall have included responsibility on a project basis for analyzing operational methods and developing computer programs to meet desired results. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Certifications and Degrees: Certified in software discipline levels. This classification requires the possession of a baccalaureate or equivalent university degree in management information systems or computer science.

8. **Staff Programmer**

A Staff Programmer acts under general supervision, and can act in a lead capacity on complex applications, and/or on complex data processing problems and can work independently as a technical specialist. This classification must have a minimum of four (4) years experience in electronic data processing systems study, design, and programming, at least (2) years of which shall have included responsibility on a project basis for analyzing operational methods and developing computer programs to meet desired results. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and

situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Certifications and Degrees: Possession of IT career certification that acknowledges skills and competency in the area of specialization. This classification requires the possession of a baccalaureate or equivalent university degree in management information systems or computer science.

9. **Associate Programmer**

An Associate Programmer acts under general supervision, can act in a lead capacity on a team of programmers, and/or participates with other programmer analysts on projects of a very complex nature or unusually broad scope. This classification must have a minimum of three (3) years experience in electronic data processing systems study, design, and programming, at least one (1) year of which shall have included responsibility on a project basis for analyzing operational methods and developing computer programs to meet desired results. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Certifications and Degrees: Possession of IT career certification that acknowledges skills and competency in the area of specialization. This classification requires the possession of a baccalaureate or equivalent university degree in management information systems or computer science.

10. **Instructor**

An Instructor is responsible for developing, presenting, training to ordering agency staff as necessary. This classification requires two years experience in providing IT instruction and proficient in training principles and methods. The Instructor will be responsible for managing tasks related to consulting, planning, programming, organizing, scheduling, and conducting training on IT systems. The Instructor will

provide consultation, manuscripts, present instruction, coordinate the construction or preparations of training aids using good judgement and discretion in the form, content, and method of presenting the subject material. Instructor shall also select and manage technical training assistants, and organize facilities to support the training effort; develop and maintain a master calendar of events; be able to communicate effectively with technical and non-technical staff.

Degrees: This classification requires the possession of a baccalaureate or equivalent university degree in management information systems, computer science, business or communications.